



SUPPLEMENTAL TECHNICAL INSTRUCTIONS	Supplement Number 93-3-D	Date Issued 6/24/93
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National Mapping Division

SUBJECT

Elimination of angle of rotation for features in Digital Line Graphs (DLG) and alignment of previously rotated symbols on quadrangle maps.

BACKGROUND

In Digital Line Graphs, angle of rotation was a required attribute for isolated point features (degenerate lines) that were required to be oriented on the map. On maps, these features have been represented by minimum-size symbols which were rotated to represent the true ground orientation of the feature. Minimum-size building is an example of a feature represented by a oriented symbol. Angle of rotation never has been a required attribute for features that are symbolized with a orientation based on an associated feature, for example, a toll gate or bridge abutment symbols on a road symbol.

The cost of collecting the rotation angle, and the accuracy of the collected angle, have been raised as issues. The Standards for Digital Line Graphs required that 90 percent of minimum-size symbols captured from a map fall within 3 degrees of their orientation on the map, with the remaining 10 percent within 5 degrees. Using current technology, the orientation angle could not always be captured to the above specifications. This raised the question as to how meaningful the collected orientation data were. In addition, NMD lacks a clear user requirement for symbol orientation and for the required expenditure of resources to collect this orientation.

A test product, showing minimum-size symbols aligned with the north-south neatline, was prepared for the Herndon, Virginia, 1:24,000-scale quadrangle and was circulated to representatives from the mapping center and headquarter offices for comments. Reviewers generally agreed that aligning the buildings and other features with the north-south neatline did not significantly detract from either the usefulness or overall appearance of the map.

INSTRUCTIONS

Do not collect, maintain, or show the angle of rotation for features represented by minimum-size point symbols in digital line graphs and quadrangle maps. This decision is documented in Change Notice Number 2 to Part 2, Specifications, and Change Notice Number 2 to Part 3, Attribute Coding, of Standards for Digital Line Graphs. Collection of angle of rotation for cliff dwellings and mine adit entrances also has been

discontinued. These two symbols will be aligned with the contours at the time of product generation. Mine entrances will be perpendicular and cliff dwellings parallel to the contours. There now is no angle of rotation parameter code for any feature in the DLG-3 standard.

Continue to align symbols for associated features (e.g., toll gate on road) relative to the primary feature as shown in the applicable publication symbols standard. Rotation angle has never been collected for these features.

Digital Collection and Revision:

Digital Line Graph collection:

Do not collect angle of rotation when creating DLGs from existing graphics.

Replacement mapping, and standard and limited update mapping:

Do not collect angle of rotation when creating or revising DLGs. Remove any existing angle of rotation codes from DLGs being revised. At time of product generation, align all minimum-size point symbols with the north-south neatline. Align mine entrance and cliff dwellings with the contours; mine entrances will be perpendicular, and cliff dwellings parallel, to the contours.

Traditional Revision:

Replacement mapping:

Align all minimum-size point symbols with the north-south neatline.

Standard update mapping:

If the coverage is being completely rescribed, align all minimum-size point features with the north-south neatline. If the old separate is salvaged, rotate new symbols if existing symbols are rotated.

Limited update mapping:

Rotate new symbols if existing symbols are rotated.

For all traditional revision mapping, align mine entrances and cliff dwellings with the contours; mine entrances will be perpendicular, and cliff dwellings parallel, to the contours.

APPLIES TO

All National Mapping Division 1:24,000-, 1:100,000- and 1:250,000-scale digital and graphic products.

ISSUED TO

EDC, MAC, MCMC, RMMC, and WMC.

APPROVED BY

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cc: Chief, NMD ADC/RES ADC/PBA ADC/CR ADC/IS MPO NIMA
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